

Application No: 09/866,822
Attorney's Docket No: US 010264

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently amended) First and second feedback equalizer signals for controlling a decision feedback equalizer, wherein the first feedback equalizer signal is supplied as output from a first feedback loop and is delayed by an implementation delay and wherein the second feedback equalizer signal is continuously supplied as output from a second feedback loop and is free of the implementation delay, wherein said first and second feedback loops process decisions from a decision device common to both of said first and second loops, wherein the output of the decision feedback equalizer is common with a an input of the decision device.

2. (Currently amended) A decision feedback equalizer (DFE), comprising:

- a forward equalizer;
- first and second adders;
- a decision device;
- a feedback equalizer; and
- an N-tap filter,

wherein:

the first and second adders, the decision device and the feedback equalizer constitute a first feedback loop;

the second adder, the decision device, and the N-tap filter constitute a second continuous feedback loop;

the second feedback loop is free of an implementation delay associated with the first feedback loop; and

N is a positive integer;

and the output of the decision feedback equalizer is common with an input of the decision device.

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3. (Original) The DFE as recited in claim 2, wherein the N-tap filter is implemented in fast logic.
4. (Original) A digital television receiver including the DFE as recited in claim 2.
5. - 9. (Canceled)
10. (Currently amended) A decision feedback equalizer (DFE), comprising:
 - a forward equalizer;
 - a decision device;
 - filter means for generating a first feedback signal responsive to first filter coefficients optimized to process postcursor echoes adjacent to a main channel, and for continuously generating a second feedback signal responsive to second filter coefficients optimized to process all other postcursor echoes; and
 - means for applying the first and second feedback signals to thereby control the DFE, wherein the number of second filter coefficients is much greater than the number of first filter coefficients and the output of the decision feedback equalizer is common with an input of the decision device.
11. (Previously presented) A digital television receiver including the DFE as recited in claim 10.
12. (Currently amended) A method for controlling a decision feedback equalizer (DFE) including a forward equalizer and a decision device ~~common to first and second feedback loops~~, comprising the acts of:
 - [[a]] generating a first feedback signal responsive to first filter coefficients optimized to process postcursor echoes adjacent to a main channel;

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[[b)]] continuously generating a second feedback signal responsive to second filter coefficients optimized to process all other postcursor echoes; and

[[c)]] applying the first and second feedback signals to the first and second feedback loops, respectively, to thereby control the DFE, wherein the output of the decision feedback equalizer is common with an input of the decision device.